

CLAIMS:

1. An ink receiving medium comprising a microporous polymeric film, said microporous polymeric film consisting of a polymer and a hydrophilic polymer melt additive.

5           2. The ink receiving medium as recited in claim 1, wherein said microporous polymeric film has a thickness in the range of 1 to 3 mils.

          3. The ink receiving medium as recited in claim 1, wherein said hydrophilic polymer melt additive comprises  
10           surfactant.

          4. The ink receiving medium as recited in claim 1, wherein the amount of said hydrophilic polymer melt additive is in the range of 1-12 wt.%.

          5. The ink receiving medium as recited in claim 1, wherein said polymer is polypropylene.  
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          6. The ink receiving medium as recited in claim 1, further comprising a substrate laminated to said microporous polymeric film.

          7. A method for manufacturing an ink receiving  
20           medium comprising the steps of:

          forming a molten blend of a polymer and a hydrophilic polymer melt additive;

          extruding said molten blend to form a polymeric film; and

25           forming micropores in said polymeric film.

8. The method as recited in claim 7, wherein said forming step comprises stretching said polymeric film.

9. The method as recited in claim 7, wherein said hydrophilic polymer melt additive comprises surfactant.

5        10. The method as recited in claim 7, further comprising the step of laminating said microporous polymeric film to a substrate.

11. A method of manufacturing a printed product comprising the steps of:

10        forming a molten blend of a polymer and a hydrophilic polymer melt additive;

extruding said molten blend to form a polymeric film;

forming micropores in said polymeric film; and

15        applying ink to one side of said microporous polymeric film.

12. The method as recited in claim 11, wherein said forming step comprises stretching said polymeric film.

20        13. The method as recited in claim 11, further comprising the step of laminating said microporous polymeric film to a substrate prior to said ink applying step.

14. The method as recited in claim 11, wherein said ink applying step comprises ink jet printing.

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15. An ink receiving medium comprising:

a microporous polymeric film; and

a microparticle coating applied on one side of said film,

5        wherein said coating comprises colloidal inorganic particles and a polymeric binder, the weight percent of colloidal inorganic particles being greater than the weight percent of polymeric binder.

10        16. The ink receiving medium as recited in claim 15, wherein said colloidal inorganic particles are made of silica.

17. The ink receiving medium as recited in claim 15, wherein said colloidal inorganic particles are made of alumina.

15        18. The ink receiving medium as recited in claim 15, wherein said polymeric binder comprises polyurethane.

19. The ink receiving medium as recited in claim 15, wherein said polymeric binder comprises polyvinyl alcohol.

20        20. The ink receiving medium as recited in claim 19, wherein said polymeric binder further comprises a cross-linking agent.

25        21. The ink receiving medium as recited in claim 15, wherein said microporous polymeric film is made of polypropylene.

22. The ink receiving medium as recited in claim 15, wherein said coating further comprises surfactant.

23. The ink receiving medium as recited in claim 15, wherein said coating further comprises plasticizer.

5        24. The ink receiving medium as recited in claim 15, further comprising a substrate laminated to said microporous polymeric film.

25. A method for manufacturing an ink receiving medium comprising the steps of:

10        extruding a molten polymer to form a polymeric film;

         forming micropores in said polymeric film;

         making a microparticle coating fluid comprising colloidal inorganic particles and a polymeric binder, the weight percent of colloidal inorganic particles being  
15        greater than the weight percent of polymeric binder;

         coating said microporous polymeric film with said microparticle coating fluid; and

         drying said coated microporous polymeric film.

20        26. The method as recited in claim 25, wherein said colloidal inorganic particles are made of silica.

         27. The method as recited in claim 25, wherein said colloidal inorganic particles are made of alumina.

         28. The method as recited in claim 25, wherein said microporous polymeric film is made of polypropylene.

29. The method as recited in claim 25, wherein said forming step comprises stretching said polymeric film.

30. The method as recited in claim 25, further comprising the step of laminating said microporous polymeric film to a substrate.

31. A method of manufacturing a printed product comprising the steps of:

extruding a molten polymer to form a polymeric film;

forming micropores in said polymeric film;

10 making a microparticle coating fluid comprising colloidal inorganic particles and a polymeric binder, the weight percent of colloidal inorganic particles being greater than the weight percent of polymeric binder;

15 coating one side of said microporous polymeric film with said microparticle coating fluid;

drying said coated microporous polymeric film; and

applying ink to said coated side of said microporous polymeric film.

20 32. The method as recited in claim 31, further comprising the step of laminating said microporous polymeric film to a substrate prior to said ink applying step.

33. The method as recited in claim 31, wherein said ink applying step comprises ink jet printing.

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34. An ink receiving medium comprising a microporous stretched polymeric film and a colloidal coating applied on at least one side of said microporous stretched polymeric film, wherein said colloidal coating comprises
- 5 submicron inorganic pigment particles embedded in a binder.